

ABSTRACT OF THE DISCLOSURE

The weight of a shaped charge carrier is predetermined as a buoyancy control parameter for perforating guns. Each charge carrier comprises a co-axial assembly of inner and outer carrier units. Both carrier units may be fabricated from low density metals or composite materials comprising high strength fibers in a polymer matrix. The outer carrier wall thickness may be a weight control parameter. Shaped charge units having no independent casement are formed into sockets within a light-weight inner carrier unit. Alternatively, the shaped charge units may be formed within light-weight material cases and seated within sockets in the light-weight inner carrier unit. Materials and dimensions are selected to substantially achieve the desired carrier buoyancy in the specific well fluid whereby a perforating gun assembled from a plurality of the carriers may be substantially floated into a completion position and allowed to settle along the floor or ceiling of the wellbore as predetermined by the perforation direction.